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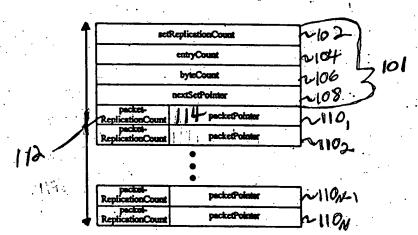
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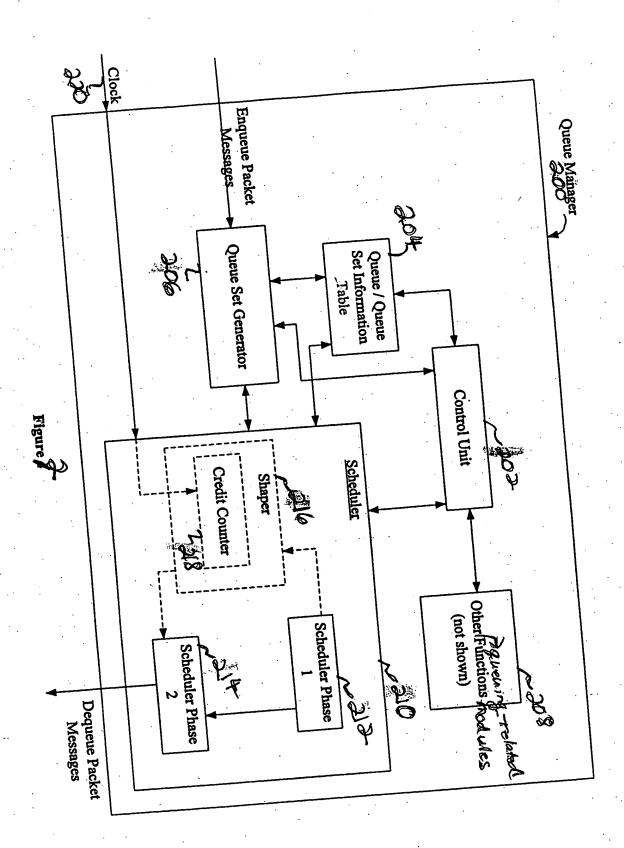
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Queue Set Data Structure



F16. 1

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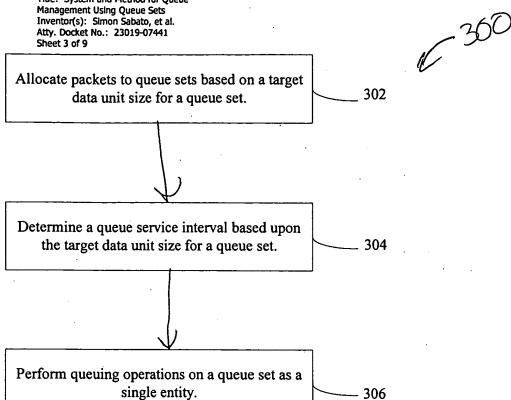


FIG. 3

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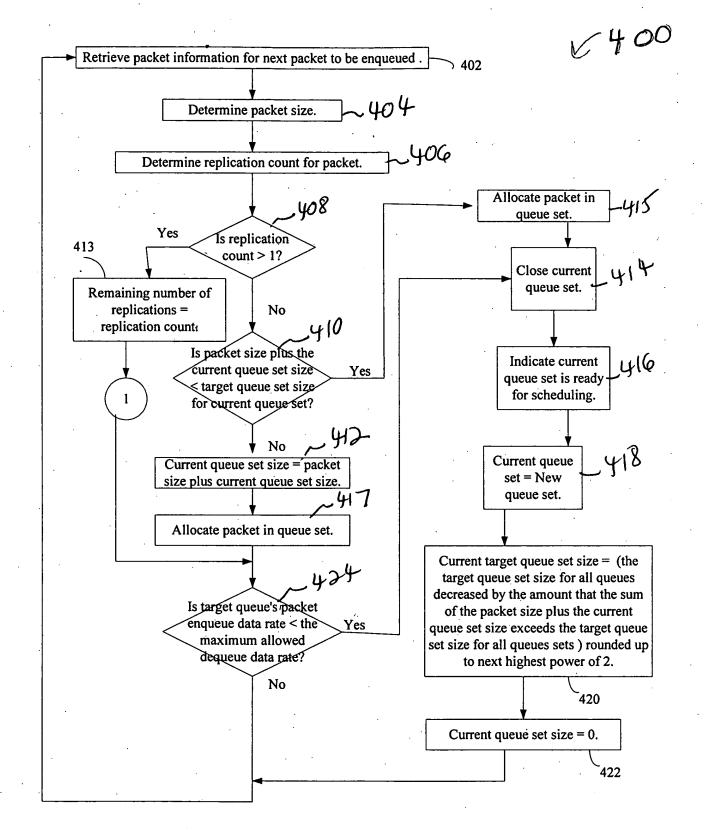
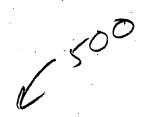
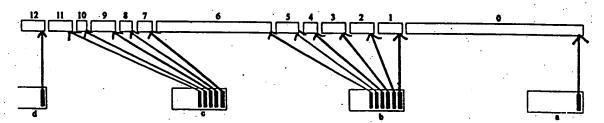


FIG. 4

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Queue Set Packet Allocation

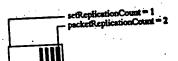


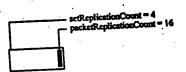
F16.5

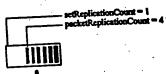
Atty. Docket No.: 23019-07441 Sheet 6 of 9 610 600 is current queue set 2 No size = 0? 612 Yes 624 Determine largest number of replications of 602 packet rounded up to nearest power of 2 having Store packet with a combined size < current target queue set size. determined largest Determine replicated number of packet size in data units Set replication count = 1. replications as rounded up to nearest 614 packet replication power of 2 of packet for count in queue set Set current queue set size to the remaining number of with set replication largest determined number times replications. count. the packet's size. 615 Is replicated packet Compute product of set Close current size plus the current replication count and determined queue set. queue set size < target number of packet replications 626 queue set size for Indicate each copy current queue set? Remaining number of replications of current queue equals remaining number of 606 Yes set indicated by set replications minus product of set replication count replication count and determined Store packet with packet as a separate queue number of packet replications replication count in the entry that is ready current queue set. 628 for scheduling. 618 Is size of remaining 608 number of Yes Current queue replications < current Current queue set size = set = Newtarget queue set size? replicated packet size plus queue set. 620 630 current queue set size. No Set replication count = 632 Set replication count + 1. Current queue set size = 0. Return Current target queue set size = target queue set size for all queue sets. 634 Store copy of packet in current queue set with packetreplication number set to remaining number of replications. 636 Return FIG. 6

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F16.7

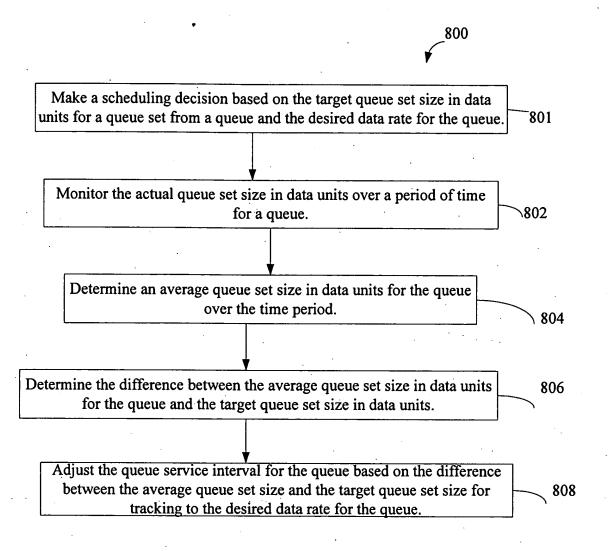
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